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THE MARINE RECORD.

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AROUND THE LAKES.

CLEVELAND.

The life-savers at this port received a new boat on Tuesday.

The Otego will have a new Ætna shaking grate put in by G. C. Barnes.

The marine business is lively at Ashtabula. Fifty-one vessels were reported at that port Tuesday.

A quick trip is reported for the schooner J. H. Breck, Kingston to this port with ore in two days and eight hours.

Our efficient lighthouse keepers Captain George Tower and Captain J. M. Reed have donned their new uniforms.

The foundation for the lighthouse crib is being prepared, and the crib itself will probably be towed into place next Monday.

The new steam derrick supplied at that dock by Messrs. Andrews and Hitchcock for loading and unloading vessels seems to be working well.

The steamyacht Cyclone, owned by Captain Paul Lohnemeyer, is out in good shape for the season, and will make regular trips between this port and Rocky river beside Sunday excursions.

The yacht Circe, owned by M'Eacheran & Ritchie Bros., which was tied up inside the breakwater, parted her rope during the gale on Saturday, drifted on the beach and pounded herself to pieces. She was valued at $800 and is a total loss.

The steamyacht Nadine, Captain A. Robinson, owner and master, after a railroad ride of some miles, was successfully launched into placid Lake Chippewa last Saturday. We wish Captain Robinson much success in his picnic enterprise.

The Keweenaw, Captain Sloan, will have her rudder fixed at the Globe drydock. She will ply regularly between this port and Buffalo from the dock of the Cleveland Forwarding Company, Superior street. The fare is $8.50 with room, or $6 for the round trip.

Clark I. Butts' fine schooner Thomas P. Sheldon, Captain McHenry, got the first $1 ore charter on the upturn, Escanaba to Cleveland. After finishing her repairs by getting a new bowsprit and completing her new bulwarks she will load coal at 70c for Milwaukee.

It is said the propeller Jay Gould, which had some trouble at this port with ore men recently on account of her arches will be taken out of the ore trade, and will load railroad iron at Chicago for Marquette, and will continue in the Lake Superior trade the rest of the season.

The American Eagle, Captain Dahlke owner and master, took the J. I. Case to Ashtabula on Tuesday, Captain Dahlke says he intends to remain at Ashtabula the balance of the season with the American Eagle together with the tug Hawley, the demands of the shipping interests at that port requiring more tug power.

The tug Thomas Quayle, with the schooners, Lafrinier Zach Chandler and Monguagon in tow was obliged to put into this port on account of a loose wheel, which will be tightened here. The tug American Eagle towed the Lafrinier into this port and the Monguagon and Zack Chandler to Ashtabula harbor.

The master of the schooner C. C. Trowbridge, reports having discovered a reef or shoal near the entrance to Prentiss Bay which is not marked on the latest government charts. The Trowbridge ran hard aground on it during a northerly gale. The depth of the water covering the reef is only seven feet, and some provision ought to be made at once to mark it, as Prentiss Bay is becoming quite an important point for vessels in the lumber trade.

At Globe drydock since our last report the Goshawk had her buts calked and some minor repairs, the yacht Tempest received a new wheel and a canal boat some general repairs. The river tug Thomas Quayle, which was out in the blow of Saturday with three schooners is in to have a loose wheel made tight, and Mr. D. P. Eells' yacht Winnfred to get a new wheel.

The new steam yacht Tempest built by Mr. J. Chatterton at No. 30 West Center street, and which was fully described in the RECORD of February 7, has been chartered for the season by the Evangelical Association of this city. The Tempest will run as an excursion boat to and from the picnic grounds at Vermillion. On Tuesday the yacht took on board a pleasure party of ladies and gentleman and made the sail to Linnwood Park very enjoyable to them.

The schooner Joseph Paige, Captain W. R. Williams, takes coal to Milwaukee at 70c. The Paige is 625 new tons burden, was built at Milwaukee by Wolf & Davidson in 1872, is owned by Fitzgerald, of Milwaukee, and rates A2. Captain Williams has sailed her ever since she was launched, twelve years. He was master of the Glenbula, which was tied up in the river at Chicago during the great fire of 1871, and burned to the water edge. The schooner Burton was built on the bottom of the Glenbula.

George Galley, one of the crew of the schooner Mattie C. Bell, in his efforts to overtake two boys who had stolen the yawl boat of the schooner capsized his own boat and was drowned. His body was recovered. It is said he could not swim. It should be the duty of every sailor to learn that useful means of self preservation. Too much reliance should not be placed by the sailor man upon the vessels completment of life preservers, rafts or any other accidental means of escaping death when he finds himself in the water. He should be able to help himself.

Late charters include: Propeller Kittie Forbes, coal, Erie to Chicago, 80 cents; schooners F. W. Wheeler, coal, Cleveland to Chicago, 80 cents, D. G. Fort, pig iron, St. Ignace to Erie, $1, and Annie Smith, coal, Cleveland to Chicago, 80 cents; steambarge C. M. Pratt, coal, Toledo to Collinwood, 70, cents. Steamer Argonaut and schooners Francis Palms and Conton ore, Escanaba to Cleveland 95c, schooners Camden, coal Cleveland to Milwaukee, 70c; Thomas P. Sheldon, coal from Cleveland to Milwaukee, 70c; Joseph Paige, coal from Cleveland to Milwaukee, 70c. Melvin S. Bacon, coal from Cleveland to Milwaukee, 70c.

SANDUSKY.

Special to the Marine Record.

There is considerable lumber scattered along the beach, at Pelee Island, which was lost from some boat in the northeaster of Monday, the 9th inst. I would like to find out through the colums of the MARINE RECORD who owns the lumber, as I should like to buy it. The owner can address me at Sandusky, Ohio. CAPTAIN W. G. WILD.

CHICAGO.

Special to the Marine Record.

The schooner Westchester of Milwaukee, running between Sturgeon Bay and this port, has been making extraordinary good time this season, having made four round trips to the former port in twenty days, a distance of 240 miles, or a total of 1,020 miles in eighty days, allowing for time consumed in loading and unloading. This is acknowledged to be the fastest time ever made by a sailing vessel on Lake Michigan. The Westchester is sailed by Captain J. P. Clark and was built in 1847 at Huron by Ketchum and rebuilt in 1883 by Captain J. P. Clark. She is 150 tons burden, classed B1 and is owned by Latham & Smith of Sturgeon Bay, who may be proud of the record she has made.

The old schooner Evelyn of Milwaukee, built in Chicago in 1857, arrived here June 12 for the first time in fifteen years. She is 40 new tons burden and will enter the lumber trade between this port and Muskegon. There is no record of her ever having been rebuilt.

The steamer City of Traverse was towed into this port last Thursday night by the steamer City of Grand Rapids, the machinery of the former having broken down. A new crank and some repairs to her machinery are being made here.

The tug Protection, when rebuilt, will have placed upon her a powerful fire pump to be used in case of fire on the river.

The schooner Morning Star has been sold by the National Furnace Company, of Depere, to Captain A. Elliott. Consideration $3,463.

The work of raising the bridge at North Halstead street will commence at once. The structure will be raised fourteen feet.

The tug John Gordon was in Miller Brothers' drydock Saturday for a new wheel.

The steambarge Almendinger was in the Chicago drydock Saturday getting her stern bearings fixed and a new coat of paint.

The steambarge Tempest and the schooner Andrew Jackson collided Thursday between the structure of the new Rush street bridge and the dock, causing damage to both. The accident would not have occurred but for unnecessary obstructions placed in the way of the vessels by the bridge builders.

The schooner Cuba, in tow of the tug Crawford, collided with Wells street bridge Wednesday, doing slight damage to herself and the bridge. The accident was occasioned through the breaking of the tow line.

Another steam pleasure yacht has been added to the number of excursion boats plying at our lake front. She is an excellent boat 60 feet in length, 13 feet 6 inches beam and 5 feet depth of hold. James Elliott built her at South Haven, and she is commanded by Captain Wm. J. Winter.

Captain Corcoran, of the Anchor Line steamship Conemaugh, which arrived here Tuesday, reports passing a spar standing about five feet above water, about six miles northeast from Milwaukee pier, in a most dangerous spot for vessels going into and out of that port.

The Supreme Court having decided that the city ordinance to abate the smoke nuisance is legal, lots more trouble and expense will be put upon the tug owners, who do their best to get their work done efficiently and with as little annoyance to the general public as possible. Smoke consumers of all kinds have been tried, none of which have proved a success, and the burning of hard coal will not enable the tugs to get up steam quickly, so that the owners and tugmen are at a loss to know what to do. Some of them have decided to put up with the extra expense and inconvenience occasioned by burning hard coal, while others determine to fight the case in other courts.

The Anchor Line steamship Gordon Campbell, Captain D. Murphy, arrived here Monday, laden with coal from Buffalo. She did not remain out of commission but a short time.

The Anchor Line steamship Philadelphia, Captain John Leonard, which arrived at this port Monday morning, laden with 1,000 tons of coal, made the trip up from Buffalo in seventy-six hours. Great credit is due to Trout, of the King Iron Works, Buffalo, for the improvements recently made to her machinery.

The United States lighthouse supply steamer Dahlia is in port. She has on board a cargo of supplies for the lighthouses in this district. She will visit other ports on Lake Michigan and supply the different lighthouses with stores.

The schooner Lotus, in tow of the tug Prindiville, collided with Lake street bridge last week and lost her jibboom. We hope this is the last bit of bad luck we shall have to record for her worthy captain, R. Seator, this season.

The schooner Sardinia, Captain Martin Howard, got her stern badly damaged on the 11th, outside the harbor. The tugs Alpha and Flossie Thielcke were racing to get the tow, when the former, in endeavoring to avoid a collision with the latter, struck the schooner a very hard blow on the starboard quarter. The Alpha obtained the tow, but it will cost her dearly, as the damage done to the schooner will foot up some $300 or more.

An accident which, happily, did not occasion more serious results, occurred to the schooner Margaret A. Muir Wednesday. She was unloading coal at the Silver Creek coal dock, North Branch, when the hook on the twin buckle broke, leaving the whole weight of the bucket, weighing, with its contents, about 2,200 pounds, upon the pine derrick, causing it to break, and the bucket and its contents fell a distance of thirty feet on to the deck, smashing in a portion of the schooner's deck and a heavy deck beam, and rendering unconscious, for a time, two men engaged in unloading her, who were in the immediate vicinity. Repairs to the schooner's deck were made at the Vessel Owner's ship yard.

The steamer City of Grand Rapids went into the Vessel Owners' drydock Saturday, and got her bottom calked.

The schooner Metropolis, which has laid in ordinary all this season, is being repaired and fitted out for business at a considerable cost. The vessel belongs to the Goit estate, and is managed by a gentleman named Cochrane. She is perhaps the most handsomely modeled craft afloat on the lakes today. She was built at Cleveland by Peck & Masters in 1857, hails from Chicago, is 245 tons burden, and classed A2.

The big propeller Clyde arrived on Saturday from Buffalo, coal laden. While being towed to a dock in the North Branch she got aground at North avenue, and it required three or four tugs and several hours'

[Continued on 4th page.]

MARINE LAW.

AYER VS. HIGGIE—ANSWER OF WILLIAM F. HIGGIE.

The legal complications growing out of the purchase of the schooner Higgie give promise of some interesting developments before reaching a conclusion:

Schuyler & Kremer, attorneys for Captain William F. Higgie, have filed an answer in the United States circuit court to the bill previously entered by Edward A. Ayer. The document is voluminous and enters a general denial to the allegations made by the complainant. It states that February 11, 1884. Higgie was owner of the schooner Higgie and had been part owner of her for upwards of nine years. The date mentioned the schooner was lying at an elevator dock loaded with 32,000 bushels of wheat, previously stored by David Dows & Co., who had chartered the vessel to carry the cargo to Buffalo. The vessel was built in 1872, and launched October 15 of that year. She was constructed upon the most approved plan, of the best material, and in a good, workmanlike manner, and had the reputation of being one of the fastest sailing vessels on the lakes. While owned and in possession of defendant she was kept in good sailing and seaworthy condition, and when last rated by the underwriters was classed A2, and had been so rated for the last five years. February 1, 1884, Higgie met the complainant and offered to sell the schooner for $21,000, and Ayer stated that he would send his Captain to examine the vessel. A week later Ayer informed Higgie that the vessel had been examined, and that he had ascertained, that she was twelve years old, and was told that her rating was A2. The following day Higgie was summoned to Ayer's office and informed that Captain William H. Rounds, a marine inspector, had advised Ayer not to pay over $18,000 for the vessel. Ayer said the schooner was just what he wanted and that he would give $19,000 for her. Higgie accepted and was paid $500 as earnest money. February 11 the sale was consumated and a bill of sale given to Ayer, who paid $5,000 cash, and gave two promissory notes for the remaining $14,000. One of these, for $10,000, is due August 1, 1884, and the other January 1, 1885. The notes were secured by mortgages on the schooner. The defendant denies that he ever requested Ayer to buy the schooner or that he represented that she was sound and seaworthy in every respect and contained no rotten or unsound timbers, and alleges that Ayer did not buy the vessel upon his recommendation, but upon examination made by Captain Ledden and representations made by uninterested parties. He also alleges that Ayer is an owner of and dealer in vessel property and thoroughly acquainted with the significance attached to the classification and rating of vessels, and that at the time the purchase was made he knew that the vessel's rating clearly indicated that she was liable to be defective and have decayed timber in her. At the time of the sale Higgie claims that he had no knowledge that the vessel was unsound, or that the cap in the centerboard box was decayed and rotten. Regarding the damage to the schooner and her cargo, he alleges that it was the result of an unskillful and unseamanlike management and not on account of any unsoundness in the vessel. As proof that he had no intention of defrauding the complainant, Higgie points to the fact that he made no attempt to negotiate the sale of the notes, but left them with his Chicago banker for collection when due.

On the morning of May 10, 1882, during a heavy northeaster, the schooner Lady McDonald ran into harbor at the entrance to Sturgeon Bay canal for shelter, and instead of going into the canal and making fast to the piers, she let go her ancher at the entrance and swung across the mouth of the canal so as to obstruct the greater part of the entrance; and the schooner Bissell, coming in about an hour later, found it impossible to go into the canal on account of the McDonald obstructing the entrance. The Bissell immediately let go her anchor as soon as she passed the outer piers, and made every effort to avoid collision, but her anchor did not stop her headway till she struck the McDonald on the starboard bow, doing about $2,000 worth of damage to the McDonald's headgear, rail and stanchions before being separated in a heavy rolling sea. W. W. Calkins, of Chicago, owner of the McDonald, presented the bills to Mr. Murphy, owner of the Bissell, and demanded payment, which was refused, and Mr. Calkins libelled the Bissell at Racine, Wis., and the matter has been contested in the United States court at Milwaukee, and Saturday the final arguments in the case were heard and decree rendered dismissing the libel with costs against Mr. Calkins. The judge held that the Lady McDonald had no right to anchor at the entrance to the harbor and obstruct it in the manner in which she did. Several other vessels had entered the harbor and tied up, and the judge held that the McDonald should have done likewise.

SALVAGE.

U. S. District Court, District of Connecticut.

Alonzo J. Beardsley vs. the schooner Sterling.

Shipman, J

This is a libel *in rem* for salvage.

On the night of May 10, 1883, or early in the morning of May 11, 1883, the schooner Sterling, of the value of $1,200, went ashore on a sandy, pebbly beach, near No Point, in Long Island Sound, and about two miles from Bridgeport lighthouse, and lay parallel with the beach. The owner applied first to the agent of the libelant, who is the owner of steam towing and wrecking tugs in Bridgeport harbor, and being by the agent directed to the captain of one of the tugs owned by the libelant, asked him to go down and pull the schooner off and how much he would charge. The captain said he guessed he would go, but he did not know what he would charge. No bargain was made.

On the same day the agent of the libelant went with one of his steam tugs and tried unsuccessfully to pull the schooner off and made two more unsuccessful attempts on the same and on the following day. On the third occasion he took also another tug owned by the libelant, and both tugs made the attempt. At this time a hawser of one of the tugs was broken and her rail was broken, and she was thereby damaged from $8 to $10.

On the third day one of the tugs went alone and this fourth attempt was successful and the schooner was towed within the harbor of Bridgeport. The agent of the libelant went with the tugs on each occasion for the purpose of doing the work. The attempts could only be made at high tide and the work was in effect a continuous undertaking.

The schooner was not in immediate peril when the help was furnished, but she was fast aground and help was indispensable and was greatly wanted by the owner, who was anxious to get her off before a high south wind should drive her further on the beach. On the last day he was afraid that the tug was not coming and sent for her, and also displayed in the schooner's rigging a signal for a tow boat.

The claimant promptly asked the libelant for his bill and that it be made as low as it could be, because he had had bad luck that season. A bill of $50 for towing the schooner off the beach was rendered, was approved and payment was promised. It was, and was considered by the owner to be, a reasonable bill for the service. Payment has been frequently demanded of the claimant but he had no money and could not pay. The libelant offerred to let the claimant work out the bill, but he was unable to do the work that was wanted. He did, however, make some repairs for the libelant which were worth $2.25, and which both parties intended should be applied upon the salvage.

The services were salvage services. The schooner was in distress and must have help; the assistance of the libelant's boats was asked by the owner of the schooner, but the services were not rendered upon an agreement for payment for the use of the tug in any event. There is nothing in the case to show that the services of libelant's tugs were to be paid for in case of non-success. The success of the service and the distress of the vessel are the ground of the libel.

There has been neither abandonment nor waiver of the lien. It was not lost by permitting the owner to be in possession of the schooner. (The H. D. Bacon, Newb. 274, Cutter vs. Rae, 7 Howard, 729,) nor by the subsequent conduct of the salvor. Payment has been frequently demanded and has been promised when the schooner should be sold. The mere forbearance of the libelant to distress the claimant, when nobody has been injured by the delay, is not to be considered a waiver of the lien. The owner of the schooner appears alone as claimant, and no *bona fide* purchaser seems to have been injured by the delay in bringing the libel.

Under the circumstances of the promise and delay of payment, interest should be allowed from May 16, 1883, to May 31, 1884, from which $2.25 and interest should be deducted.

Let there be a decree in favor of the libelant for $50.80 and costs.

David F. Hollister for the libelant; Morris W. Seymour for the claimant.

NAUTICAL NOTES.

Captain John Keith, of Chicago, has been appointed one of the administrators in the Lotus-Maxwell collision case.

The St. Paul chamber of commerce recommends an appropriation for the building of a lighthouse at Grand Marais.

The steamer Plumb will commence her popular trips to the Thousand Island Park and around Fiddler's Elbow early in July.

The schooner Morning Star was sold on the 12th by the National Furnace Company of Depere, Wis., to Anthony Elliott for $3,463.

The propeller Boston for Buffalo takes 2,465 tons of miscellaneous freight. It is the largest cargo which has been taken out of Chicago this season.

The schooner Halstead, laden with cedar posts, sprang a leak during Monday's gale off Racine, and was prevented from sinking by the life saving crew of that port.

Captain Young, of New York, having failed to raise the propeller Oneida, Captain John Donnelly, a Canadian submarine diver makes a proposition to try it for $14,000.

The Sturgeon Bay tug Thomas Speer has been placed in drydock for general repairs, which will amount almost to a rebuild. The schooner Minnie Slauson is also being repaired.

The schooner being constructed by Wolf & Davidson, of Milwaukee, will be named James Mowatt, after the Superintendent of the above firm's drydock. The vessel will be launched in a few days.

The tug Leviathan has gone with a lighter to release the schooner Lincoln Dall, near Death's Door. She will take all the lumber out of the schooner and save everything possible if unable to get her.

The fast steam yacht Permelia, in trying to make a fast run down the St. Clair river Wendesday, twisted her shaft in two and lost her wheel on Lake St. Clair. She was towed back to the Star Island House.

The tug John McKay broke her crank while towing logs. None of the Duluth houses were able to supply her with another, and it became necessary to lay her up until one could be secured from Chicago.

The Flint & Pere Marquette propellers are to carry the United States mails from Milwaukee to Ludington and Manistee, designed to all points on the Flint & Pere Marquette railroad throughout Michigan and to Toledo, O.

The Herald says if Duluth only had a first class drydock she would capture all of the marine work on Lake Superior. The boxes do very well for a small propeller but they are n. g. when such a propeller as the Freemont gets into trouble.

The old tug Constitution, purchased by James Elliott last season, having been thoroughly rebuilt was successfully launched on the 10th inst. She comes out as good as new, having been rebuilt from her keel up, many of the ribs being new. She is on the market.

The tug Alanson Sumner, which burned to the water's edge at Oswego about six weeks ago, is now being repaired, and when she is again put into commission will run as a passenger boat. She is receiving false sides which will increase her width several feet.

Captain J. A. Henriques, who has been superintending the building of the new revenue steamer Perry, at Buffalo, has been relieved by Lieutenant Littlefield who will command her during the summer, with headquarters at Erie. Captain Henriques has gone to Galveston, Tex.

The owner of the tug A. S. Piper has received a proposition from Captain Lathrope, of the government dredge, to place the craft at his disposal during the remainder of the present season, and it is very likely that the offer will be accepted. The rate of six dollars a day, net will be paid Geo. O. Spear for the use of the tug.

The tug Protection will come out of drydock in about six days all ready for business. Captain Higgie has spent nearly $3,000 for repairs on her hull and machinery and will expend an additional amount by putting a large steam fire pump aboard of her, to be used in case of fires occuring on the river front. Captain Joe Schucknech will command her.

A new canal tug, of good size and handsome appearance, came out in Buffalo on the 9th. She was built by Notter, and is named for her owner, George S. Donaldson. She is 49 feet in length, 13 feet in beam, and 6 feet in depth. Her engine, 13 by 14 inches, was made by Donaldson & Whitman, who also constructed her boiler. Captain Lew Cole is her captain.

The big propeller City of Traverse arrived in Chicago in a partly disabled condition, her crank pin having broken outside. The propeller City of Grand Rapids was in company with the Traverse at the time, and by signals was notified of her distress. She took her in tow. Outside the tug Blackball picked her up and towed her to Twelfth street. Repairs will be made as soon as the Traverse is unloaded.

THE NELLIE P. DOWNEY SUNK.

On Thursday night at about 8 o'clock, the schooner Nellie P. Downey, Captain Robert Bartley, collided with the barge Oswego in tow of the tug Glide and sunk in about five minutes. The collision was unavoidable and occurred as follows: The Glide left this port early in the evening towing the barges Oswego and Oneida and bound for Montreal via Kingston. The fog was very dense, and it was impossible to see any object even a short distance. The Downey was headed for Oswego with a cargo of 6,700 bushels of rye for Gaylord, Downey & Co., and was close aboard before they saw the lights of the tug. Captain Bartley, not seeing the barges, supposed the Glide to be a tug from Oswego to pick him up and went astern of the tug and commenced taking in sail, and did not realize the danger until the schooner fouled the tow line. Before anything could be done to free the Downey the barge crushed into the schooner and she at once began to fill. The schooner was hauled up to the barge and the crew, consisting of three men and two women, quickly went on board the barge. The water was rushing into the schooner so rapidly that it was impossible to save her, and the lines were cast off and she sunk in about five minutes from the time of the collision. Captain Bartley had the fog horn in his hand at the moment of the accident and it was about the only thing brought away. The personal effects of the officers and crew were lost.

The Nellie P. Downey was one of the best known of our lake schooners, and was owned by the Downeys, built in 1873, rated A2, and was valued at $6,000. The schooner had been in command of Captain Bartley nearly all the time since built. There is an insurance on the hull of $3,000 and the cargo was also insured. No blame can attach to the Glide for the accident, which was undoubtedly caused by the dense fog. After the schooner sunk the Glide and tow kept on towards Kingston for about an hour, but as the wind continued to freshen the captain thought it prudent to return to Oswego and arrived here all right.—*Oswego Times.*

IRON AND STEEL SHIPBUILDING.

At the annual meeting of the Iron and Steel Institute, held in London on April 30th, Mr. William John, of Barrow, read a very interesting paper on the above subject. In the course of the paper Mr. John referred to the first Bessemer steel vessels ever built, which were two sternwheel barges, constructed in 1864. These were followed, in the same year, by a paddle steamer and two sailing ships. In the next year six steel ships of an aggregate tonnage of 5,342 tons were launched, and the discovery was then made that the material was too costly to make it remunerative to build ships from it. In 1875, Mr. Barnsby, C. B., the director of naval construction, read a paper before the Institution of Naval Architects pointing out the advantages of steel for the purposes of naval construction, and since that time the use of steel has gone on increasing year by year. Mr. John gave a table, of the following statistics, showing the rate of progress of steel shipbuilding:

Year,	STEEL. Steam. No.	Steam. Tonnage	Sailing. No.	Sailing. Tonnage.
1879	22	19,522	1	1,700
1880	26	36,493	4	1,671
1881	34	68,366	3	3,167
1882	65	115,499	8	12,478
1883	92	141,552	11	14,193
	IRON			
1879	337	428,082	33	35,332
1880	362	447,389	39	40,015
1881	411	590,503	50	68,650
1882	446	672,740	83	112,852
1883	548	742,292	72	114.698

A certain proportion would have to be added to the figures given in the table for vessels built for foreign owners and not entered on the British register. The paper referred to some cases of failure of steel made on the continent for some vessels building there. These had been investigated by Mr. Martell, who had made a journey for the purpose. The Shipping World says that the case referred to by Mr. John was that of two vessels built in Germany. The frames were made of steel bars manufactured on the basic process, and a very large proportion of these gave way at the turn of the bilge while being bent. It can only be concluded, however, that some fault occurred in the manufacture, as steel made by this process has turned out to be of the most reliable nature. Mr. John says, in speaking of the want of uniformity in iron, "Over and over again we have vessels kept waiting on the stocks because of the iron plates which are condemned and have to be replaced." During the last year, of 7,500 tons of iron used at the Barrow yards no less than thirty-three tons

were condemned; and a part of this quantity, it appears, after the plates had been riveted upon the vessel, so that they had to be cut out again at great expense.

Mr. John dwelt somewhat fully on the commercial aspect of the question. In 1881 Mr. William Denny showed that for a large 4,000 ton steamer trading between London and Calcutta, steel was at that time the most profitable material employed. He gave a very interesting comparison between a certain size ship in iron and a ship in steel, which would be required to carry the same dead weight. After showing that the steel ship, although dearer at first cost, would, nevertheless, be the more profitable of the two, he went on to analyze what fall in the price of steel would be required to bring the actual cost of the steel ship and the iron ship to the same, and this he found to be 20s. per ton.

Mr. John said that last year two sister vessels were built, one of iron and the other of steel. They were of the following dimensions: 240 feet by 34 feet by 16 feet 6 inches moulded, 1,191 gross tonnage. The difference in carrying capacity in favor of the steel ship was fifty tons upon a total of about 1,450 tons, and the difference in the cost of the two vessels was somewhat under £500, so that the cost of the difference of deadweight between the two ships was less than £10 per ton, whereas the actual cost of the remaining deadweight was about £15 per ton. In this case the difference between the cost of iron per ton and the cost of steel was £2 17s. 9d., and if this be reduced to a difference of £2 4s., and the steel ship be also reduced in size, so as to carry the same weight as the iron one, the former vessel will be found the cheaper of the two. With regard to the question of corrosion, Mr. John appeared to consider that steel stood at no greater disadvantage than iron, supposing that due care were taken to remove all the scale from the plates before painting. He recommended sending the vessel to sea unpainted for a voyage, so that a slight general rust might take place, which could be removed and the bottom painted.

The new steamer America, the flag ship of the National Line of steamers, arrived at New York p. m. of June 4, from Liverpool via Queenstown, in command of Captain R. W. Grace, formerly of the Spain. The vessel sailed from Queenstown at 10:35 a. m. of May 29, and arrived at Sandy Hook at 10:15 p. m. of June 4, making the passage in the remarkable quick time of 6 days, 15 hours and 41 minutes. The America was launched on December 29 from the yard of Messrs. J. &. G. Thomson, Clyde Bank, Glasgow, Scotland. She is built of steel and is of the following dimensions: Length, extreme, 480 feet; breadth, extreme, 51¼ feet; depth of hold, 35 feet 8 inches. Her gross tonnage is about 6500 tons. She has five decks. The first or promenade deck, runs nearly the whole length of the vessel, and is connected to a turtle-back poop and forecastle. The second, or upper deck, has on it the stairways and the passenger accommodation, the room for the officers of the ship, ice houses, vegetable rooms, lamp rooms, ladies' rooms, smoking rooms and galleys. The third, or main deck, contains all the first-class passenger rooms, the saloons, pantries, receiving rooms, etc., while the extreme ends are devoted to the crew and stewards. The fourth, or lower deck, is arranged so that first-class passengers, emigrants, and cargo may be carried according to circumstances. The fifth, or orlop deck, is taken up principally with storage space for the stores used by the passengers, but may be used in parts alternatively for either. The vessel has accommodation for 300 first-class passengers and about 700 emigrants, but if no emigrants be carried the number of first-class passengers may be increased to over 500. The state-rooms are luxuriously furnished. Her cargo capacity measures 2,000 tons. She is brig-rigged, has a clipper stem, and is divided into no less than thirteen water-tight compartments by complete transverse bulkheads, extending to the upper deck in all cases but two. She is classed in the Admiralty list as a vessel which would float with any two compartments flooded. This condition has been laid down by her owners as a necessary one, as a precaution against such accidents as befall steamers when they are struck on the bulkhead and two compartments are thereby immediately flooded. The engines of the vessel are three-cylinder compound, one 63 inches and two 91 inches, with a stroke of 66 inches. They are fitted with piston valves over all the cylders. The crank shafts are built of mild steel. The boilers are seven in number, having 39 furnaces in all, and a working pressure of 93 pounds. Every facility has been afforded for getting cargo rapidly in and out of the ship. With a full passenger list she will carry comparatively little cargo, yet when the number of passengers falls off she will be quite capable of carrying a large cargo.—*Maritime Register.*

The disabled schooner Maria Martin reached Racine on the 11th, in tow of the tug W. H. Wolf, and will be repaired at once. Captain Chambers of the vessel, admits now that she was the one which collided with the schooner Emma C. Hutchinson. In addition to the injuries which were enumerated when she first appeared off Chicago harbor, the Martin's deck is badly damaged by the mizzen topmast falling upon it.

Work on the propeller Colorado is progressing finely at Buffalo. The remains of the exploded boiler, together with the sound one, have been removed, and the engines are being repaired. One is nearly sound, but the other was badly broken by the explosion. She will have two new steel boilers, eight feet shell by fourteen feet long, built by the Stearns Manufacturing Company, ready by August 1. It is probable that her name will be changed when she comes out.

The Goodrich line runs two large and elegant side wheel steamers daily, (Sunday excepted,) for Racine and Milwaukee as follows: Leaving Chicago, at 9.00 a. m. and arriving at Milwaukee, at 5 30 p. m., leaving Chicago, at 8.00 p. m., and arriving at Milwaukee at 5.00 a. m. returning; leaving Milwaukee, at 7.00 a. m. (except Sunday and Monday,) arriving at Chicago 5.00 a. m. Passengers have, a good night's rest and no dust. The fair is only $2.00 including dinner on day trip and state-room berth on night trip, being $2.25 less than by railroad and sleeping car. There is also a good connection with west bound trains out of Milwaukee, morning and evening. Office and docks, foot of Michigan avenue, Chicago. T. G. Butlin is superintendent and John Singleton, G. P. A.

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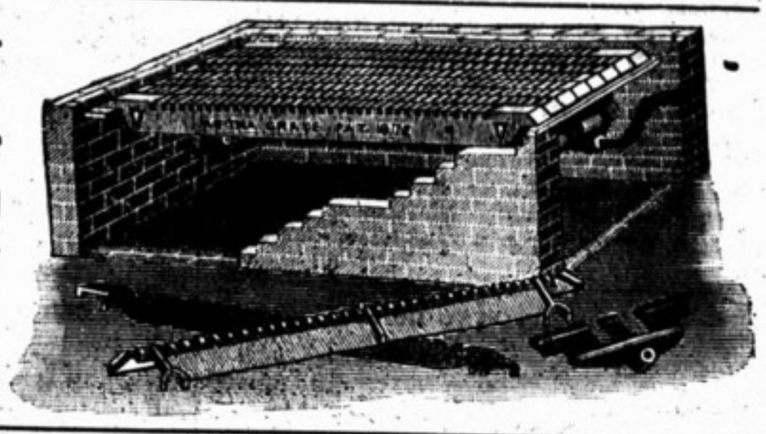

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Length over all 51 3-10 feet, breadth 13 3-10 feet and depth of hold 6 feet; draws 5½ feet of water; measures 9 24-100 (new) tons. and 18 24-100 old. Built in 1880 and rebuilt this spring, new deck frames and cabin, and machinery thoroughly overhauled. Engine is 14x14, boiler 8½ feet long and 4 8-12 in diameter. Warranted in No. 1 condition and subject to inspection, Price, $3,800. Address

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The Marine Record.

Published Every Thursday at 144 Superior Street, [Leader Building.]

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LIFE SAVING APPARATUS.

The various craft on our great chain of lakes should be supplied with rafts, and then the danger of loss of life would be reduced to a minimum. These rafts should not be toys, but large, buoyant and strong, and so attached to the vessel as to be readily released. They could, with slight expense, be supplied with a mast and sail as well as a box to contain food, though the latter equipments might not be necessary except in cases of long voyages. Vessels are almost always insured, and so are cargoes, and in case of loss the remuneration is full. If the lives of sailors are insured, the remuneration is but partial, in a monetary sense, while in that more human sense, bereavement, compensation is impossible. But it costs too much for the sailor to insure his life, and very few of them are able to do it. The life raft is an effectual insurance. We are constantly reminded of the great dangers to human life in sailing the inland seas, which all our readers know is much greater than on the ocean. It is this danger that at certain seasons of the year increases the wages of sailors to double their normal rate. There are many uninsurable vessels engaged every fall in the grain and lumber carrying trade, and it is but right that the sailor who ships in them should be paid well for his risk. These vessels are put to stress by the most ordinary gales, and if they encounter a severe one it is a miracle it they are not wrecked. Yet gales are the least of their dangers. There is no use in fighting against these vessels going to sea. High rates of freight make the inducement so great that the laws and inspectors' decrees are defied by some means or another, and so it will always be. In all cases of this kind, more especially, though large and staunch craft should by no means be without them, the life raft would be an advantage to all concerned. It is superior to anything yet invented. There are no entanglements with davits. It cannot be capsized, or if it should turn over it is quite as buoyant. It is practically safe against wrecking. It can be made large enough to carry a ship's entire crew, or, in the case of steamers, the whole list of passengers as well, and still be disposed of conveniently. With such a guarantee on board for instant use the skipper can run his risks with less fear of danger to his passengers and crew. Old hulks that remain on top of water through mere sufferance of good fortune may be sailed with their graves constantly beneath them, and satisfy man's avarice to the full, while the crew on board may be comparatively happy in its reliance on the life-raft. Of course no one sanctions this, but it is a concession that it seems must be made to the reckless side of humanity. Neither is there any law that we know of to compel skippers and owners to take this precaution, but an appeal can be made to the humanity of those interested in the lives of the people employed by them, and much accomplished in this way.

PRECAUTION AGAINST WRECK.

Last week we published an article from the *Acquatic Magazine*, by Joseph W. Norcross, who has made the subject a life study, discussing the possibility of obtaining greater safety to life in the construction of ships. The writer claims that scientific principles are not applied nowaday by the builders of vessels to the special object of safety during storms or in collisions. That builders wrack their brains in search of every expedent to make ships faster, to make the smallest amount of propulsive force serve for a trip, and to carry the greatest amount of cargo with the least expense of fuel, but when it comes to safety, pure and simple, of the human freight, the knowledge of centries ago is still paramount, no progress being observable. The one thought of value in the article referred to is that the science of the day is fully equal to the problem of building safe ships, and that means should be taken to make known science available to this end. As ships are built now the constructor takes a contract to fulfill the owner's requirements as to tonnage and little it any real science enters into the matter. We think this argument is good enough as far as it goes, and it may bring shipbuilding under more scientific principles at some far distant day, but the reformation will be slow in coming. We should like to see provisions made by Congress for a board of scientists whose duty it should be to study and discuss methods of safety in construction and examine and qualify experts in their calling, so that no man should be permitted to model a ship who does not thoroughly understand the scientific principles of buoyancy and staunchness, as well as speed and carrying capacity.

THE HENNEPIN CANAL.

Last week the friends of this measure met with varying success in the lower House of Congress. On Wednesday it was discussed about half a day in committee of the whole. A test vote was then taken and the committee of the whole incorporated it in the river and harbor bill by the close vote of 94 to 92. We can understand that the lobbyists were jubilant, but their fun was short lived, for when the bill was reported back to the House by the committee the scheme was struck out entirely. Although, in our opinion, it had no rightful place in the river and harbor bill, and some of the members voted against it in order that it might be referred to the committee on railroads and canals, the vote showed a more favorable feeling for the project than any one expected, aside from the lobbyists themselves, perhaps. They will now turn their attention to the Senate and see what can be done with that august body. In the meantime the river and harbor bill has been passed by the House with a total appropriation of $12,619,100. This sum represents but one-third of the estimate submitted to Congress by the various surveys. It will probably pass the Senate without much change.

OBITUARY.

Harvey Stephens, an old and respected ship builder of this city, died on Thursday at the age of 66 years, he having been born in St. Lawrence County, New York, in 1818. Mr. Stephens was probably as well known on the lakes as any man living. He came to Cleveland in 1843, soon after which he entered into partnership with Tisdale & Johnson in repairing and shipbuilding, with whom he continued until 1850, when the firm of Stephens & Pressley was formed. This firm built quite a number of vessels, among which we can mention the Prairie State, built for Messrs. Crawford & Chamberlain in 1851, the schooners Buttles and White Cloud, a lumber barge for Senator Ferry, of Michigan, called the Ferry, the steamer Morning Light, the propellers Boston, Maine and New York, the schooners Mary Ballard and Lady of the Lake, the barks Black Warrier and Black Hawk, the schooners L. M. Hubbey, Miami, Muskegon and Cuyahoga and the propeller S. D. Caldwell; the tugs Peter Smith, Cushing, Thomas Dowling and Joe Hooker, and the schooner Fayette Brown. In 1857 and until the fall of 1870 Messrs. Stephens & Pressley used a marine railway in their repairing business after which they commenced the construction of the drydock now in use here, which was finished in 1872, after the outlay and loss of an immense amount of money. Soon after the completion of the drydock, we think in May, 1876, Mr. Stephens sold his interest in the drydock to the Globe Iron Works and retired to private life, the firm name of the drydock being continued as Pressley & Co.

Thus the old constructors of good lake craft pass away, leaving their handiwork behind them as a monument to their skill and industry. Mr. Stephens was buried on Saturday the 16th instant, his remains being accompanied to the anchoring ground by a large circle of mourning friends. His works live after him.

A TERRIBLE ACCIDENT.

Editor of the Marine Record.

At 11:30 Monday morning a terrible accident took place in V. D. Nickerson's office on River street. John W. Warner, formerly book keeper and one of the managers of the White Stack Tug Line, and for many years connected with the tug business of Cleveland, and now book keeper for Thos. Axworthy on Water street, in the presence of about fifteen captains and friends, had the third finger of his right hand terribly lacerated with a very heavy and magnificent gold ring bearing the Knight's-Templar cross and crown. The crown being set with diamonds, cut him so deep that at one time it was thought he would not survive. The inside of the ring was beautifully engraved, as follows: "John W. Warner; from Cleveland tug men." The ring was presented by Captain John Archie, in behalf of the tugmen and friends of the White Stack Line, in a very neat speech, Captain Archie stating that they had lost a very dear friend and companion, and that they did so with many regrets, and hoped that he would accept the token offered as a small memento of their esteem and kind feeling toward him. Mr. Warner's heart was too full for utterance, and he called for some one to speak for him. Captain Robert Greenhalgh answered for him in a very pleasant and appropriate manner. Then, after a general shaking of hands, etc., all adjourned, Mr. Warner leaving his kind regards for the future welfare of the Cleveland tug men of the White Stack Line in return for this most beautiful token of their regard. N.

RAISING SUNKEN VESSELS.

An operation which excited some interest took place in the Itchen river at Southampton, some time ago, resulting successfully in the raising of the wreck of the steamship Tyne, which had sunk nearly opposite the gas works. This vessel formerly belonged to the Royal Mail Steam Packet Company, but had been sold out of their fleet, and was in progress of demolition, when a storm arising, she filled with water and sank, her back being partly broken as she was thrown on to the shoal, where she rested when the operations began. The ship being partly uncovered at low water, an 8-inch steel wire hawser was connected to the stem and stern and passed over a timber framing in the centre of the ship, and the ends of the hawser being drawn upon and tightened prevented any fear of the vessel breaking in two when she rose off the bank. The chief difficulty, however, was to empty the vessel of water in the short time that elapsed between extreme low tide and the period when the ship was entirely covered, as, the decks having been removed, there was nothing to fix any machinery to, and anything left on board during high water must be exposed to the action of the sea, water and tide, which runs very quickly at the spot until low water, thus rendering the use of ordinary pumps almost impossible, or at any rate, very troublesome. Application was made to the Pulsometer Engineering Company, of London, who agreed to undertake the pumping. Four of their No. 9 pulsometers, capable of throwing about twelve tons of water per minute, were suspended by chain blocks to the wire rope above mentioned, and iron steam pipes carried to the side of the vessel, where they were connected by flexible hose to the boiler of the tug Sovereign, retained to supply steam for driving the pumps. Everything being in readiness, pumping was commenced between four and five o'clock on the morning in question, and all the water was discharged overboard in a very short time. On the return of the tide, the wreck rose with it, and by the aid of three steam tugs, was safely conveyed across the river into the graving dock. By the use of Pulsometers, all the difficulty of fixing was removed, as these pumps work just as well when suspended as fixed, and are not injured by being immersed in the water.—*London Times.*

We print the above in order to invite the attention of our many lake divers and wreckers to this very excellent pump, which is manufactured by the Pulsometer Steam Pump Co., 83 John St., New York.

Shortly after arriving at Erie the propeller Nyack, from Buffalo, was discovered to be on fire. The ship's hose succeeded in subduing the flames without assistance from the local fire department. The damage will no exceed $500.

[*Chicago—Continued from 1st Page.*]

work to release her. There has been a great deal of complaint this season about low water all over the river. It is almost impossible for vessels drawing fifteen feet to move with safety to any part of either branch of the creek. At the foot of LaSalle street and between that street and fifth avenue the water is particularly low. Tugs cannot get close to the dock to tow light schooners without running aground, and are, in consequence, occasioned a great deal of delay and expense by breaking wheels and rudders.

An effort is being made toward proper discrimination in regard to clearance tax. As the matter now stands small vessels trading on short distances pay three or four charges, while large vessels plying between Chicago and Buffalo or Cleveland and Duluth get off comparatively easy.

The capsized scow Greenback has righted of her own accord, and gone ashore below the range lights in Saginaw Bay. Her captain will endeavor to release her as soon as the storm abates. He found a portion of his trunk and clothing along the beach, but got no trace of the missing $80.

J. S. Dunham's new 14-inch steam pump arrived Friday from Buffalo, and will be prepared for immediate service. This makes two pumps for Mr. Dunham, and when his new tug is ready for service he will be prepared to take care of any wrecking work which may turn up.

Grain shippers can not obtain all the tonnage they require, and telegrams have been received offering 95 cents per ton on ore from Escanaba to Ohio ports, with $1 in prospect. The low rates ruling on grain has driven much of the grain carrying craft into other channels and Buffalo shippers are compelled to go to ore receiving ports to find tonnage for up loads. Freights are firm at 2½c on wheat and 2¼c on corn. T. W.

VERMILLION.

The body a woman, supposed to be the one lost from the dredge off Lorain some weeks ago was found on the beach about one mile east of this place last Thursday. There is a mark about her neck as though made by a rope and death may have resulted by strangulation. There was a ring on her finger, and she was clad only in night clothes.

TOLEDO.

Andrews & Southard report the schooner Willie Keller chartered, corn to Buffalo at 1½c, and the propeller Queen City and barge Cyclone, coal to Duluth at 80c.

It is said that Captain John J. Downs, for many years a captain on the lakes, suicided Sunday by drowning. Ill health and mental derangement were ascribed as the cause.

FRANKFORT.

Special to the Marine Record.

Ed. Slyfield, keeper of Point Betsy lighthouse, was married last Wednesday to Miss Kate McIntosh, and Charles Slyfield, Captain of tug Slyfield, was united in bonds of matrimony to Miss Setta Olliver on May 2d.

The schooner Sylvester Neelon, of St. Catherine, is in port loading hewn square elm timber for Kingston, from where it is shipped to Liverpool, and to be used in ship building. On Sunday the Neelon ran up the British flags to her top mast heads, perhaps the first ever flung to the breeze in our harbor, and the British ship was an object of interest to all. An American schooner got up spunk in the afternoon and aired our star spangled banner, and pennant.

Captain J. F. Linscott is billed to deliver a nautical lecture, "Life on the Waves," this week, relating his experience of four years on board of a New Bedford whaleship, around Cape Horn, and up the Arctic ocean and South Sea Islands.

The tug Ganges, A. McMillan and Sweet Brothers have arrived and will fish out of this port.

The schooner Neelon gets $80 per M, cubic measure, freight on square timber to Kingston. This is at about the rate of $5.35 per M board measure. C. B.

SAND BEACH.

The steamer Pearl, which went on a reef near White Rock, on the 13th instant, did not pound much and her damage will be slight. The Pearl is 531 tons burden, was built at Detroit by Clark in 1875, and classed A1½, her valuation being $40,000. Her master, Captain John Edwards, is as skillful a navigator as follows the lakes. She was pulled off on the 16th by four tugs.

DETROIT.

Special to the Marine Record.

June 17—A supplementary northeast gale to that of the 8th instant set in on the 12th, causing much damage to the shipping at various points. Steamers were weatherbound and unable to keep up with advertised time. The steamer Alaska was shut in at Sandusky, the Evening Star at Toledo, and those outward bound on Lake Huron were delayed at Port Huron. The storm also played havoc with the rafts. The situation of those which were on Lake Huron, however, has not yet come to hand. The tug John Owen, which had charge of a large one, came to grief at Rond Eau on Friday last, breaking up and going on the beach, but will eventually be recovered.

The schooner Cataract, owned at Port Stanley, arrived in Pigeon Bay for a cargo of wheat on Saturday, but soon after coming to anchor dragged and went high upon the beach. She will be easily got off when the storm is over.

There are many yet along the borders of the lakes who will remember the sad casualty which happened on the date of this letter thirty years since, the burning of the steamer G. P. Griffith fifteen miles below Cleveland, with the loss of 285 lives. The steamer had just been purchased at Buffalo by Captain C. C. Roby and W. Studdiford, and was on an excursion voyage to Chicago, leaving Buffalo on Sunday and meeting with destruction the morning following. Captain Roby and wife were among the lost. Also the burning of the steamer Washington on Lake Erie forty-six years since, this month, with the loss of 60 lives. She was a new boat on her second trip.

The lightship in Lake St. Clair was run into by the scow Mona on Friday, and damaged $200. She was towed to this city for requisite repairs.

The new steambarge Monteagle, launched recently at Buffalo, and owned by M. F. Cummings of Oswego, called here on Saturday morning en route to Chicago. She corresponds well with the descriptions given of her by the Buffalo papers, which I readily endorse. She has three masts, two smokestacks, and is painted a snow white. On making her landing she ran into the dock, foot of Bates street, damaging it to the extent of $30, and her port bow as much more.

Captain Gilbert Knapp, the first commander of a revenue vessel on the lakes (the Split Log, in 1819,) resides at Racine, Wis., hale and hearty, at the ripe age of 94. Captain Francis Martin, another retired revenue master, resides in this city aged 84 years.

Three sidewheel steamers, the Keweenaw, Evening Star and Chief Justice Waite arrived here from Toledo on Thursday with excursion parties. The first two were liberally patronized, but the Waite far less.

Thomas Daly, a well-known engineer, is to be the successor to H. W. Granger as local inspector of boilers at this port. His name, for that purpose, has been sent to to Washington, and will doubtless be approved.

The fleet of vessels owned by Candler Brothers, in this city, intend for the present to carry coal from Buffalo to Toledo until such time as lumber freights improve. As large quantities of coal are almost daily being shipped from Toledo to other ports, this would seem like "carrying coals to Newcastle."

The schooner Smith and Post, which, a few days since, had to abandon a non-union for a union crew, has since made one trip, and her master is well satisfied with the change.

It is now thirty-eight years since the first steambarge came on the lakes. This was the Petrel, commanded by Captain J. W. Kelsey. She had no main deck, and only forward and aft for cabins.

A morning paper here announces the charter of the schooner Ganges, coal, Buffalo to Green Bay at $5 per ton, and also the same vessel, staves from Detroit to Buffalo at $16 per M. Now these are the largest rates ever offered since the era of lake navigation, and as vessel owners are complaining of hard times there must be a hole in the skimmer somewhere.

The schooner J. N. Carter was released from Kincardine reef last night by the tug Bob Hackett, and towed inside the harbor. She had been thus prison-bound since last fall, and is the last of the wrecks thus hazarded on that coast.

Fisherman's Shoals, in Green Bay, has been the source of much trouble to vessels frequenting that locality, and an effort is now being made to have a stake or buoy planted there, which, eventually, will be carried out by the government.

A small sidewheel steamer named the Chicoumiti has just arrived at Windsor from Lake Ontario, and, it is stated, will be put on the Detroit and Chatham route.

The distance from Detroit to Bar Point, according to the original survey, is twenty miles, thence to Point Au Pelee thirty miles, and on to Buffalo, 174 miles, making the entire distance 224 nautical miles, instead of 280 miles, as it has been usually estimated.

The damaged wheat in the steambarge Enterprise has been sold to Captain Gaskin. One thousand seven hundred and forty-six bushels were disposed of at auction for 12¾ cents per bushel, and 1,065 bushels at 55½ cents, making a total of 2,892 bushels damaged.

Mr. J. Emory Owen, the owner of the tug John Owen, noticing the announcement that his tug had met with disaster to her raft in Lake Erie, informed a reporter here that such was not the case, that he had telegraphed the captain of the tug and had received a reply that nothing had occurred and the raft was yet in good shape on Saturday. In the face of this assurance the tug returned to the Detroit river on Sunday with only a small portion of her raft left, the remainder being strewn along the shore at Rond Eau. Now the question of veracity rests solely between J. Emory Owen and Captain J. P. Young, the master of the tug, who is well known as a man beyond reproach.

The propeller California, recently damaged on Lake Huron, has completed her repairs at this port and has taken her departure.

The schooner Charlie Crawford stranded on Fighting Island, but was released by the steamer C. N. Pratt at an expense of $200.

Every master of a sail craft should be commended for exercising rigid economy in the management of his vessel during these hard pan times. Yet it would seem that where a vessel, upward bound, with coal at 50 cents per ton and sailors at $2 per day, lies in Detroit river for five days for a fair wind in preference to taking a tug at low rates, that man is rather more nice than wise; otherwise put his head to soak and leave the mate in charge for a few hours to exercise common sense.

Captain Wm. Daniels, a veteran Oswego sailor, was in the city yesterday, homeward bound.

The propeller James Davidson, which was wrecked on Thunder Bay reef in October last, was insured for $5,000 in the Mechanics' and Traders' Insurance Company, of New York. The insurers refused to pay on the ground that she was abandoned without suitable pains being taken to get her off the reef. The St. Clair Navigation Company, her owners, obtained a verdict in the United States Circuit Court at Detroit for the full amount against the insurance company. It is understood, however, that a motion for a new trial will be made without delay, in order that certain questions of law may have a full hearing before the court. J. W. H.

BAY CITY.

Hawgood & Avery's new steambarge at Wheeler & Crane's yard is being planked.

Nelson Anger, mate of the barge Board of Trade, during the storm on Lake Erie on the 9th, was swept overboard with part of the deckload of the vessel, which was lumber, and also a shipmate named David Lima. The steambarge Clinton came along soon afterward and rescued him from his perilous situation, but it is feared that Lima was lost. The vessel was in tow, with other barges, of the steambarge Belle Cross from Bay City. Anger was landed at Amherstburg and took the first train to Buffalo to meet his vessel. Much praise is due the captain of the Clinton for the efforts he put forth to rescue the imperiled sailor.—[The lumber thrown from the Chicago Board of Trade is doubtless that referred to by our Sandusky correspondent, Captain W. G. Wild, who desires to buy it.]

CHEBOYGAN.

The steambarge Kershaw broke down on Lake Huron on the 15th and let go her tow. She has been repaired.

MILWAUKEE.

Special to the Marine Record.

The wrecked schooner Three Brothers goes to the Milwaukee shipyard for repairs although on her arrival here she was docked at Wolf & Davidson's yard with her cargo, and received temporary repairs. The survey was made on the 16th. She will require a new forefoot, thirty feet of new keel, nine new strakes of plank, refastening where hogged, and recalking.

The new steambarge building at the Milwaukee shipyard, and intended for the Chicago lumber trade, is in frame, and will be completed September 1. The contract was let for her machinery to James Sheriffs. Her boiler is to be 7 by 13 feet, of 7-16-inch steel, and her engine is to be 20 by 24 inches.

The scow Ahnapee, ashore on Sheboygan north point, has been abandoned as a total loss. The Ahnapee went on the rocks in a fog, a week ago Monday night, and a northeast gale with a heavy sea set in during the night and continued for two days. The vessel's deck load remained intact, and when an examination was made of her on Wednesday she appeared in good shape. On Thursday evening the tug Welcome, with a wrecking outfit, left here for the wreck, but was obliged to put into Sheboygan on account of another northeaster, which had set in, and remained there for two days. At daylight Monday morning the tug went to the wreck prepared to begin operation on her, but before a steam pump was used it was discovered that the vessel's bottom was entirely out of her, she having pounded heavily on the rocks, and that she had changed her position since the examination was made.

The tug John Owen, with a raft in tow, was caught in the heavy gale off Rondeau, Lake Erie, on Saturday, and lost her raft, which went to pieces.

Ore freights are becoming more firm in sympathy with grain freights, and shippers were offering 95 cents from Escanaba to Ohio ports. The schooner Francis Palms was chartered at the figure from Escanaba to Cleveland.

The tug Arctic which arrived here Monday morning was docked at Wolf & Davidson's main yard for repairs.

The owners of the wrecked barge Monitor telegraphed here from Detroit to have a drydock ready for her.

The steambarge Monohansett was towed in here yesterday in a disabled condition. C. B.

ESCANABA.

Special to the Marine Record.

The steambarge Oscar Townsend, which left here Tuesday with the schooners L. Hanna and Ed. Kelley in tow, ran upon the South Gull and is full of water, and has a heavy list to starboard. Her consorts avoided the land and kept on their course.

The schooner Delaware ran upon Plum Island in coming through "The Door" and is out. The tug Delta pulled at her without result.

Most of the cargo of the wrecked schooner Lincoln Dall has been lightered, under the superintendence of Captain Kirtland. Two steam pumps lowered the water in her two feet and a third is expected to free her. In the event of the Dall being released, which Captain Kirtland now thinks possible, her owners will put machinery into her converting her into a steambarge for the lumber trade. The Lincoln Dall was built at Chicago by Miller Brothers, in 1869, is owned by David Dall, of Chicago, classed B1, tonnage 206 new. E. G.

RACINE.

Captain Chambers, of the schooner Maria Martin, which was in collision with the Hutchinson off Sheboygan, denies the report which has gained circulation regarding that affair. He says the damage to his vessel is slight. The yawl boat was not lost and the falling of the mast did no damage whatever.

SARNIA.

The propeller California, of the Montreal line, which was on the rocks off Sand Beach, passed down Saturday in tow of the tug Balize. She was pumping hard, and will go into drydock at Detroit.

PENTWATER.

The wrecked schooner Experiment is at work recovering the machinery of the steambarge Norman, which was wrecked last fall. Captain Baffel is having excellant luck so far, and hopes to get both engine and boiler before July 1.

BUFFALO.

Special to the Marine Record.

A dispatch received here Saturday announced the death at Sault Ste. Marie of W. H. Ramsdell of typhoid pneumonia. Mr. Ramsdell was purser of the steamer Japan, and was obliged to get off at the Sault about two weeks ago on account of illness. His home was in Detroit, where he had been clerk in the office of J. T. Whiting, general agent of the Lake Superior Transit Company.

The ship boats of the old revenue cutter Commodore Perry were sold at public auction by Lieutenant Littlefield, at the Union drydock on Wednesday afternoon.

The collector of customs at Fort Erie has ordered that all boats, small or large, which touch the Canadian shore between Point Abino and a point one mile south of Black Creek, shall first report to him and pay fifty cents. The move pretends to be for the prevention of smuggling. It is intimated by some that the ferry company are at the bottom of it.

Captain Robargh reports that he lost 125,000 feet of his deck load of lumber off Long Point on Tuesday, besides losing the main mast and rigging of the ship. The loss on the boat will amount to $1,000, which will fall on the owner. The mate was washed overboard and afterward picked up by the steambarge Clinton. Two other sailors were washed overboard but were rescued.

Coal freights continue very firm, with a good demand for tonnags to Lake Michigan ports. Many vessels are still coming here from Ashtabula and Cleveland to load coal. Were it not for these and the regular line steamers that are placed in this trade, shippers would be in a bad plight to forward stocks. Late engagements include the steamers Boston, Lehigh, Clarion, and V. H. Ketcham for Chicago at 80 cents; steamer J. N. Glidden for Milwaukee at 80 cents; steamer Northerner for Superior City at 80 cents. H.

DULUTH.

Special to the Marine Record.

The schooner David Dows, Captain Allsgood, which arrived here recently, brought in the largest cargo ever brought to this port. It consisted of 2,247 tons of coal for the Ohio Central Barge and Coal Company. The largest brought in here before this was 2,150 tons by the schooner Adams of the same line. Captain Allsgood says that he can beat this even, and will make an attempt to do so on his next trip. The Dows will go to Marquette and load iron ore.

A strong recommendation for a lighthouse at the entrance of Grand Maries Harbor, on the north shore of Lake Superior, was introduced by Hon. H. M. Rice in the St. Paul chamber of commerce a few days ago. A petition for a deputy collectorship at this harbor is also being signed. Grand Maries is the only natural harbor of refuge on the long stretch of coast from Duluth to Port Arthur. Some money has already been expended by the Government in improving it. It has already served the purpose of refuge in several instances and the needs of both a deputy collectorship and a lighthouse at the place is urged.

A few days ago a large consignment of tea arrived at Duluth direct from China for Toledo parties, via stmr to Portland, Oregon, the Northern Pacific & Duluth, and Transit line to Toledo.

Captains and owners seem to think the Government signal station here is improperly located and poorly equipped to serve the great interests represented by the shipping at and to the port of Duluth. E.

OSWEGO.

The steamer Ontario, which is to run in connection with the N. Y. O. & W. railroad to the Thousand Islands, arrived here on Sunday evening in tow of the tug Proctor. Work upon her is so incomplete that it is hard to tell how she will look when everything is done. The Ontario is 167 feet long and 36 feet beam, and looks like a good and safe sea boat.

The tug Sharley Butler is stationed at Ludington as a ferry.

WANTED.

We want a small TUG, of not over 30 inches draft, to tow a 10x60 foot scow on a canal. Address, stating price and particulars, LAUTER & FRESE, Indianapolis, Ind.

LAKE AND OCEAN TRAFFIC.

DULLNESS ON THE LAKES—VESSELS CONSTRUCTEDFOR THE COASTING TRADE.

Special Correspondence Marine Record.

DETROIT, June 16.

A resume of the lake and ocean traffic in years gone by takes us up to the year 1864, during which season nineteen vessels were dispatched from the lakes. There was but little deviation in frieghts from former seasons, and dullness on the lakes still ruled supreme, with but little prospect of an advance. As in two previous seasons, parties came on here from Boston, Mass., and had one or more vessels constructed for the coasting trade, the material and cost of building here being much less than on the seaside. The following craft, in their regular order, were respectively sent out, their cargoes being chiefly lumber and staves:

1864, May—Bark Mary Roe, Captain McCrae, walnut, Port Stanley.

Tug A. A. Turner, Captain Ralph, Detroit to New York.

Schooner M. Kinnie, walnut, Toledo to Boston.

Schooner Alice Curtiss, walnut, Toledo to Boston.

Schooner Mary Brown, walnut, Toledo to Boston.

Schooner Boston, walnut, Toledo to Boston.

June—Bark Thermutis, Captain Tucker, copper and staves, Detroit to Liverpool.

Schooner Plowboy, walnut, Toledo to Boston.

Schooner Saranac, Captain Gale, copper and cedar, Detroit to Liverpool.

July—Schooner Yorktown, petroleum, Cleveland to Liverpool.

August—Tug T. C. Jewett, from Buffalo to New York.

Bark Huron, Captain Bromick, timber, Detroit to Boston.

October—B. K. Wirralite, Captain Foran, oil cake, Detroit to Liverpool.

Bark Wavetree, staves, Port Stanley to Liverpool.

Bark Etowah, Captain Wraight, copper, Bruce mines to Liverpool.

Schooner Octavia, lumber, Cleveland to Boston.

Tug U. S. Grant, Buffalo to New York.

Bark C. E. Rosenbury, Captain Horton, supplies, Milwaukee to Europe.

Propeller W. H. Merritt, horses and supplies, Kingston.

1865—Brig Sea Gull, Captain Jackman, general cargo, Toronto to Port Natal.

Bark Thermutis, Captain Gale, copper, Bruce mines to Liverpool.

Schooner Saranac, Captain Wraight, copper, Bruce mines to Liverpool.

Bark Rosenbury, Captain Bearse, walnut, Toledo to Boston.

Bark W. S. Pierson, Captain McMillan, timber, Sandusky to Hamburg.

Brig Lucy A. Blossom, Captain Lynn, walnut, Detroit to Boston.

Schooner Union, Captain Geel, emigrants, Lake Michigan to Nicaragua.

Bark J. Drummond, Captain Jackman, walnut, Port Stanley to Hamburg.

Schooner Clyde, walnut, Sandusky to Boston.

Bark Thermutis, second trip, Captain Gale, petroleum, Cleveland to Liverpool.

Schooner R. N. Brown, Captain Higgins, walnut, Toledo to Boston.

Bark Wirralite, Captain Jones, copper, Bruce mines to Liverpool.

Bark J. DeMolay, Captain Mills, copper, Bruce mines to Liverpool.

1866—Schooner Erie, Captain Balch, Toledo to Boston.

Schooner E. M. Baxter, walnut, Toledo to Boston.

Schooner Saranac, Captain Wraight, iron ore, Bruce mines to Liverpool.

Brig Vidon came over from Norway and returned with a cargo of corn.

Schooner Superior, Captain Lewis, walnut, Port Huron to Boston.

Bark J. De Molay, Captain Tucker, copper, Bruce mines to Liverpool.

Schooner Junius, Captain Wick, walnut, Toledo to Boston. On reaching Lake Erie she sunk and was a total loss.

British gun boat arrives at Windsor from Liverpool.

1867—Bark Cella, Captain Hunter, peas, Toronto to Cork.

Schooner Narragansett, Captain Murphy, petroleum, Cleveland to Liverpool.

1868—There were but three departures this year, as follows: Brig Sailor Boy, Captain Humphrey, oats from Chicago.

The bark L. H. Cotton took on a cargo of petroleum at Cleveland for Liverpool, and was burned soon after leaving port, October 25th; Captain Geo. DeWolf, master.

Bark Etowah, Captain Patterson, petroleum, Cleveland to Liverpool.

1869—Etowah, Captain Campbell, petroleum and staves, Cleveland to Liverpool.

Bark Thermutis, Captain Dick, refined oil, Cleveland to Liverpool.

Steamer Washington, flour, Chicago to New York.

Schooner Union Jack, wheat, Kingsville to Europe.

Schooner Phœbe Catharine, wheat, from Kingsville to Europe. J. W. H.

DIAMETERS OF SCREW PROPELLERS.

Of all other elements, the efficiency of screw propellers seems to be but little affected by relative diameters. That is to say: if a ship has a screw ten feet in diameter, cutting off two feet of it seems to have no injurious result as regards its action. In some cases it has been a positive benefit. A screw steamer was built in England last year to run in shoal water, and its propellers were only 12 (twelve) inches in diameter. The vessel itself was about 100 feet long, but these toy propellers, as they may be called, drove that boat at twelve miles per hour. The screws of torpedo boats are very small in diameter, only 36 inches in some cases, but the boats, as is well-known, are the fastest things that float on water.

Navigation on the great lakes is attended with difficulties, for some of the lakes are shallow, and vessels which trade in and out of local ports have no more water than they need. In some cases their wheels are one-third their diameter out of water. The efficiency of such a wheel is less than one equal to the portion wholly immersed, for it is not in a position to utilize the power expended on it. It would seem that reducing the diameter so that the wheel would be wholly under water should give greater efficiency in all respects.—*Mechanical Engineer*

SELF-LUBRICATING BUSHINGS FOR TACKLE BLOCKS.

We print below, cuts and description of one of the most sucessful bushings for tackle blocks ever invented, which is called the phosphor bronze self-lubricating bushing and which is manufactured by the Penfied Block Co., of Lockport, N. Y., exclusively.

Fig. 1. PATENTED. Fig. 3.

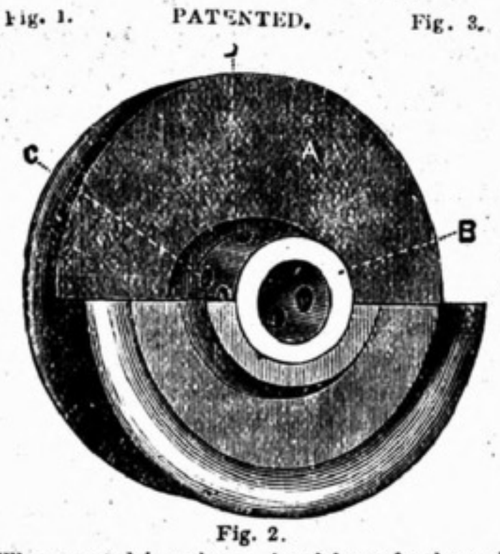

Fig. 2.

The metal in these bushings is the celebrated phosphor bronze which is recognized as one of the very best wearing metals in market and from it the bushings take their name. Cut No. 1 shows the Phosphor Bronze part itself before being inserted in the hub of an iron sheave (see B in cut No. 2) or into the hub of an iron bushing for use in a lignumvitæ, sheave as shown in cut No. 3.

Cut No. 2 is intended to represent an iron sheave with a quarter section cut away and showing at B the Phosphor Bronze bushing, at C the holes to conduct the lubricant from the chamber D to the pin or axle. D shows a part of the chamber which contains the store of lubricant. This lubricant remains plastic until sufficient heat may have been generated to cause it to flow through the holes C to the pin. As soon as the heat abates, the flow ceases. The supply of lubricant can be removed if ever required but ordinarily it will last the lifetime of the block. These bushings have now been thoroughly tested and in every instance have given complete satisfaction.

Parties who have tried other bushings unsuccessfully are requested to write to the manufacturers and give these bushings a trial.

This company manufactures a full line of the celebrated Anchor Brand tackle blocks both wood and wrought iron, also warehouse, railroad and steamboat trucks, and will be pleased to supply sheir catalogue and price list.

Geo. B. Carpenter & Co.,

Ship Chandlers and Sail Makers.

Ship Chandlery Goods of all Descriptions.

MANILA ROPE OF THE VERY BEST MAKE

Steel and Iron Wire Rope and all Its Fittings.

202 to 208 South Water-st.,

CHICAGO, ILL.

C. E. BENHAM,

317 Detroit Street,

KEEPS IN STOCK

A Full Line of Vessel Supplies,

Lubricating and Lamp Oils of the Best Quality,

AND A GENERAL LINE OF LAMPS, CROCKERY AND TABLE CUTLERY.

OPEN DAY AND NIGHT.

TELEPHONE NO. 1540.

From 10 to 25 per cent Saved

BY BUYING SUPPLIES AT

JOHN SCHEUFLER'S

Cash Grocery,

OPPOSITE FRED GROCH'S COAL OFFICE.

SANDUSKY, OHIO.

MARINE SUPPLIES A SPECIALTY.

STEADY STARBOARD

AND STOP AT

Capt. Dahlke's

ONE PRICE BOOT AND SHOE STORE

And Examine a Fine Line of Spring Goods at Very Low Prices.

297 Pearl-st., Cleveland, O.

GRUMMOND'S

Mackinac Line,

For Mackinac, St. Ignace, Cheboygan, Alpena, Oscoda, Port Huron, Detroit and intermediate lake and river ports.

Steamer ATLANTIC, Capt. D. Nicholson,

Leaves Cleveland every Friday evening at 8 o'clock. During the warm weather and pleasure season the

Steamer Atlantic

Will extend the regular trip on to Petoskey, Harbor prings and Charlevoix.

CLEVELAND FORWARDING CO., Agents, Office and Dock, Foot of Superior-st., Cleveland.

DAVID BARNHISEL, Agent.

DOMESTIC & STEAM COAL

Cleveland, Ohio

TRAVELERS' REGISTER.

LAKE SHORE & MICHIGAN SOUTHERN.

Commencing Sunday, May 11, 1884, at 12 o'clock noon the time given in the figures below is the new standard (Ninetieth meridian) time, which is thirty-three minutes slower than Cleveland time proper:

Eastward.	Arrive	Depart.
No 4, Fast Limited Express	*1 10 A M	*12 05 A M
No 8, N Y, B & A Express	*6 35 A M	*7 00 A M
No 26, Elyria Accommodation	†8 05 A M	
No 35, Buffalo Ac'm via Sandusky	†10 35 A M	†10 50 A M
No 35, Toledo Accom via Norwalk	†10 35 A M	†10 50 A M
No 12, N Y & B Fast Express	*1 55 P M	*2 25 P M
No 14, Special N Y & Bos Expres		5 00 P M
No 2, Night Ex via Norwalk	9 40 P M	†10 00 P M
No 22, Night Ex via Sandusky	†9 42 P M	
No 26, Conneaut Accommodation	†4 25 P M	

Westward.	Arrive,	Depart,
No 1, Fast Limited Express	*11 55 A M	*12 05 A M
No 23, Mich Express via Sandusky	*2 15 A M	*2 35 A M
No 3, Chicago Express via	‡6 05 A M	6 30 A M
No 25, Mich Accom Norwalk		†6 10 A M
No 21, Toledo Ex via Norwalk	†12 55 P M	†3 20 P M
No 5, St Louis Ex via Sandusky	†12 15 P M	12 40 P M
No 9, Chi Pac Fx via Norwalk	*6 06 P M	*6 30 P M
No 31, Elyria ac to Elyria only		†4 30 P M
No 27, Conneaut Accommodation	†8 10 A M	

Sunday train for Nottingham—Depart 8:30 a. m. and 1:45 p. m.; returning, leave Nottingham at 9:05 a. m. and 3:45 p. m.

Reference marks—* Daily, † daily, except Sunday, ‡ daily, except Monday.

For full information as to trains and connections apply at the new city ticket office, corner Seneca and St. Clair streets, Lake Shore block.

BEE LINE

CLEVELAND, COLUMBUS, CINCINNATI & INDIANAPOLIS.

Commencing Sunday, June 8, 1884, trains of the Bee Line—Cleveland, Columbus, Cincinnati & Indianapolis Railway—will leave and arrive at Cleveland as follows, CENTRAL STANDARD TIME, 33 minutes slower than Cleveland time:

	Depart
No. 8, Columbus, Cincinnati & Ind Ex	7:00 A M
No. 23, Galion & Wheeling Express	6:40 A M
No. 9, Col., Cin., Ind & St. Louis Ex	*6:40 P M
No. 5, Col. Cin., Ind. & St. Louis Express	*12 35 P M
No. 27, Galion & C. L & W. Acc	4:00 P M
No. 29, Massillon & Ulrichsville Ex	5.00 P M
	Arrive.
No. 8, Col, Cin, Ind. & St. Louis Exp	*6:40 A M
No. 20, Uhricsville & Massillon Ex	9:00 A M
No. 2, Col. Cin. & Indianapolis Express	9:50 P M
No. 14, St. Louis, Ind., Cin. & Col. Ex	*4:45 P M
No. 22, Galion Acc	10:00 A M
No. 26, Wheeling Accom	4:30 P M
No. 4, Col., Cin & N. Y. Express	1:15 A M

Trains marked * daily, all other trains daily except Sunday

E. B. THOMAS, General Manager. O. B. SKINNER, Traffic Manager.

A. J. SMITH, General Passenger Agent. CLEVELAND, OHIO.

New York, Pennsylvania & Ohio R. R.

NEW YORK, BOSTON AND THE EAST.

The Shortest and Quickest Route to Pittsburg, Washington and Baltimore and the Southeast.

Central or Ninetieth Meridien time. 33 minutes slower than Cleveland city time.

Until further notice trains will leave from the new Central Depot, South Water street and Viaduct as follows:

6.50 a. m. ATLANTIC EXPRESS—(Daily) Pullman sleeping and hotel coaches from Leavittsburgh 8:35 a. m. to New York, Albany and Boston without change. Arrive at Meadville at 10:40 a. m. (dinner) Franklin at 12:08 p. m, Oil City 12:30 p. m, Corry 12.35 p. m, Jamestown (Lake Chautauqua) 1.35 p. m, Buffalo 5:50 p. m. Rochester 8:20 p. m.; Hornellsville 6:00 p. m. [supper]; Corning 7:25 p. m. Elmira 8:05 p m. Binghanton 10:05 p. m., Albany 5:00 a. m. Boston 1:45 p. m.; arriving at New York 6:15 a.m.

2:20 p. m. LIMITED EXPRESS—Through Pullman sleeping coach from Cleveland to New York. Arrives at Meadville at 6:30 p. m, Jamestown 8:47 p. m., Salamanca 9:45 p. m., New York 10:10 a. m.

11:00 p. m. NIGHT EXPRESS—(Daily except Sunday) Seeping coach from Cleveland Hornellsville. Arrive at Youngstown at 1:50 a. m., Meadville 3:25 a. m., Corry 4:59 a. m. Jamestown 5,57 a. m, Buffalo 9:20 a. m., Rochester 12:58 p, m., Hornellsville, 11:00 a m, Corning 12:07 p m, Elmira 12:40 p. m., Binghampton 2:19 p m., New York 9:10 p. m. Arrive at Pittsburgh 5:50 a. m., without change.

2:20 p. m. PITTSBURGH EXPRESS — Daily — Through without change, Parlor car attached. Arrives at Youngstown 5:00 p m., Pittsburg 8:02 p. m., Washington 7:09 a. m., Baltimore 8:19 a. m,

4:11 p. m. MAHONING ACOMMODATION — Stopping at all way stations, arriving at Youngstown 6:55 p. m., Sharon 8:01 p. m., Sharpesville 8:10 p. m.

6:50 a. m. PITTSBURGH EXPRESS — Daily — Through without change. Arrives at Youngstown 9.30 a. m., Sharon 10:30 a. m., Sharpesville 10:40 a. m., Pittsburgh 12 45 p m., Returning, leaves Pittsburgh at 4:15 a. m., 7:45 a. m., 12:55 p. m., and 3:45 p m.

10 35 a. m. YOUNGSTOWN AND PITTSBURGH ACOMMODATION—Stopping at all Way stations, arriving at Youngstown 1:40 p. m., Pittsburgh, 5.45 p. m.

Trains arrive at Cleveland, 6:15 a. m., 6:30 p. m., 10.20 a. m; 1:05 p. m., and 9:45 p. m,

☞ This is the only route by which passengers can reach Corry Elmira, Binghampton, New York City and intermediate points without change. No change to Boston and New England Cities.

Baggage checked through to all points East.

Through tickets and information regarding the route can be obtained at the office 131 Bank street, and at new Depot of N. Y., P & O R R., South Water street and Viaduct, Cleveland, O.

A. E. CLARK, Gen'l Pass'r Ag't Cleveland, O.
J. M FERRIS, Gen'l Man'gr, Cleveland, O.
M. L, FOUTS, Passenger Agt, 131 Bank St. Cleveland.

The Nickel Plate!

NEW YORK, CHICAGO & ST. LOUIS RAILWAY.

The passenger equipment of this New Trunk Line is all new and is supplied with the latest appliances necessary to safe speedy and comfortable travel.

At Chicago, passenger trains arrive at and leave from the Union Depot, Van Buren street.

Following is the time in effect June 1, 1884, and until further notice:

GOING EAST.

Lv. Chicago	7.50 a. m.			
Arr. Valparaiso	9.45 "			
" Fort Wayne	1.30 p. m.			
" New Haven	2.05 "			
" West Leipsic	3.56 "			
" Arcadia	4.49 "			
" Fostoria	5.00 "			
" Green Springs	5.45 "			
" Bellevue	6.10 "			
Lv. Bellevue	6.20 "		7.55 a. m.	
Ar. Lorain	7.50 "		9.16 "	Accom.
Arr Cleveland	9.02 "		10.22 "	
Lv. Cleveland			10.27 "	3.52 p. m
Arr Painesville			11.33 "	5.05
" Ashtabula			12 25 p. m.	6.03
" Conneaut			12.50 "	6.30 "
" Erie			2.09 "	
" Dunkirk			3.47 "	
" Buffalo			5.20 "	

GOING WEST.

Lv Buffalo	9.50 a. m.		
Arr Dunkirk	11.24 "		
" Erie	1.23 p. m.		Leave
" Conneaut	2.20 "		6.15a. m.
" Ashtabula	2.51 "		6.46 "
" Painesville	3.44 "		7.43 "
" Cleveland	4.52 "		8.55 "
Lv Cleveland	4.57 "	6.47 a. m.	
Ar. Lorain	6 12 "	7.35 "	
Arr Bellevue	7.35 "	9.10 "	
Lv Bellevue		9.20 "	
" Green Springs		9.44 "	
" Fostoria		10.22 "	
" Arcadia		10 34 "	
" West Leipsic		11.30 "	
" New Haven		1 35 p. m.	
" Fort Wayne		1.50 "	
" Valpraiso		5.42 "	
" Chicago		7.50 "	

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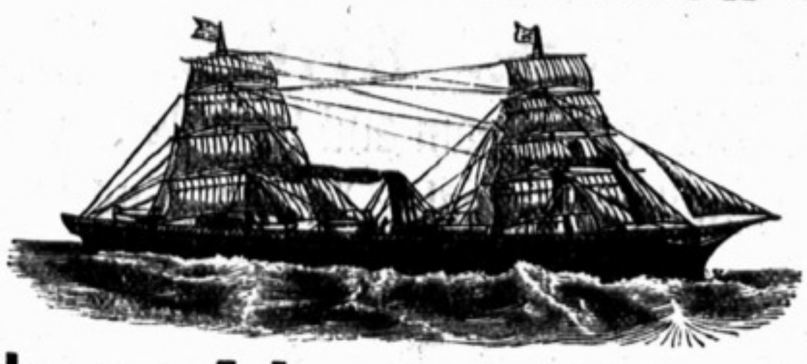

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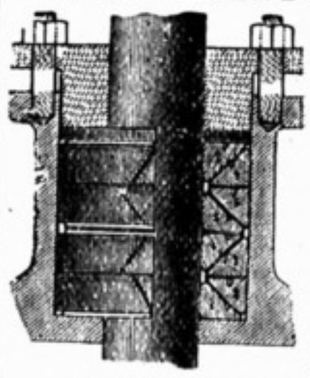

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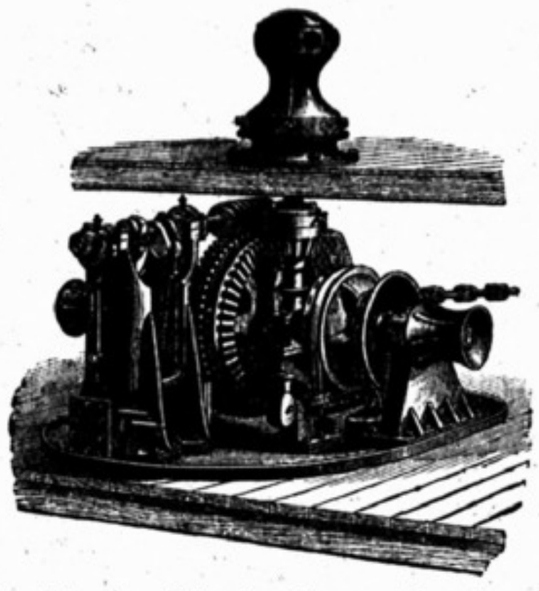
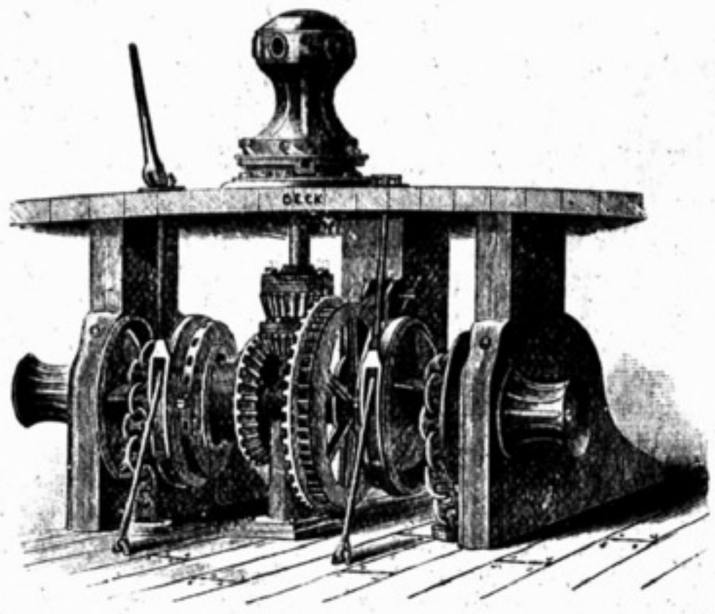


The Providence Patent Steam Capstan Windlass, New Style.



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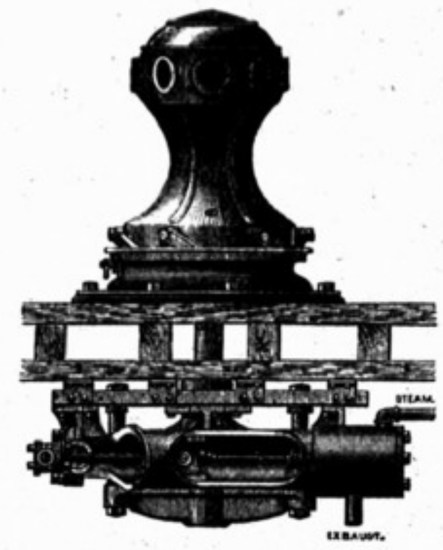

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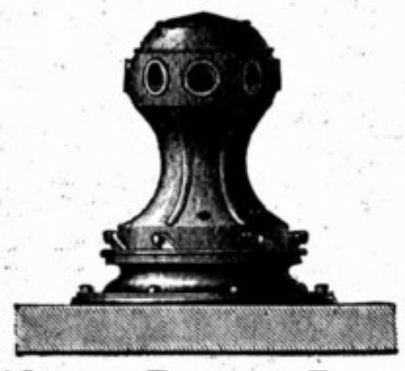
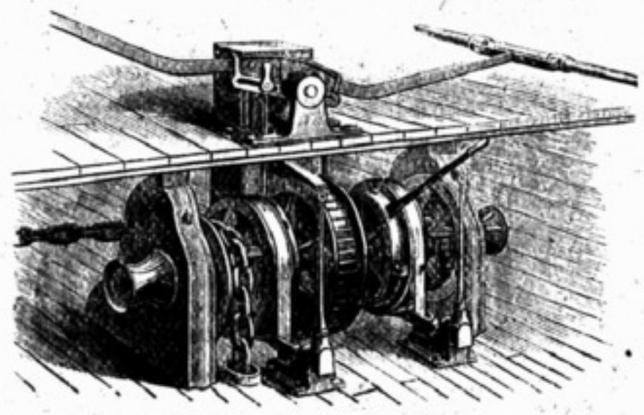


The Providence Patent Power Capstan.



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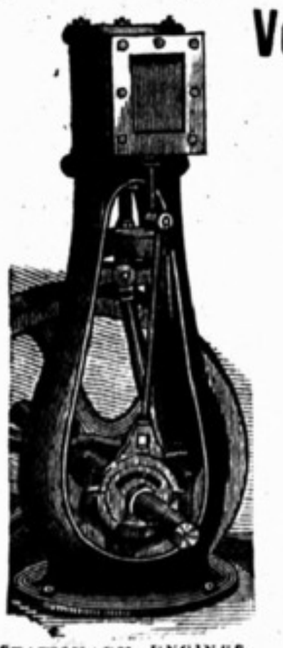

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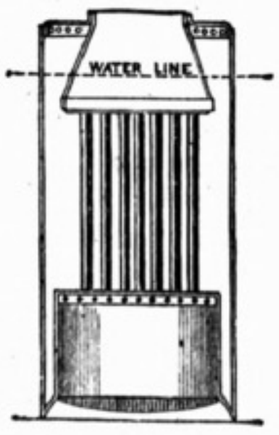

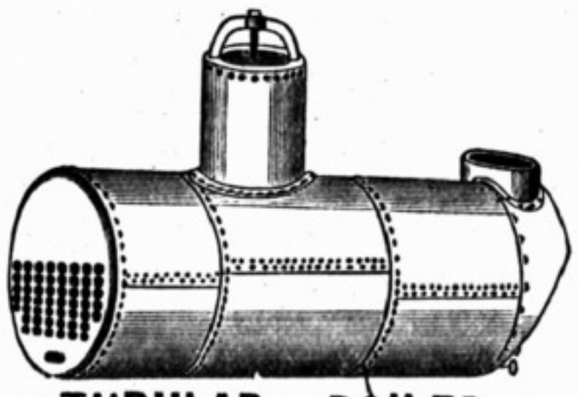

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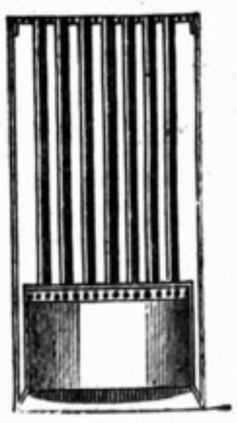

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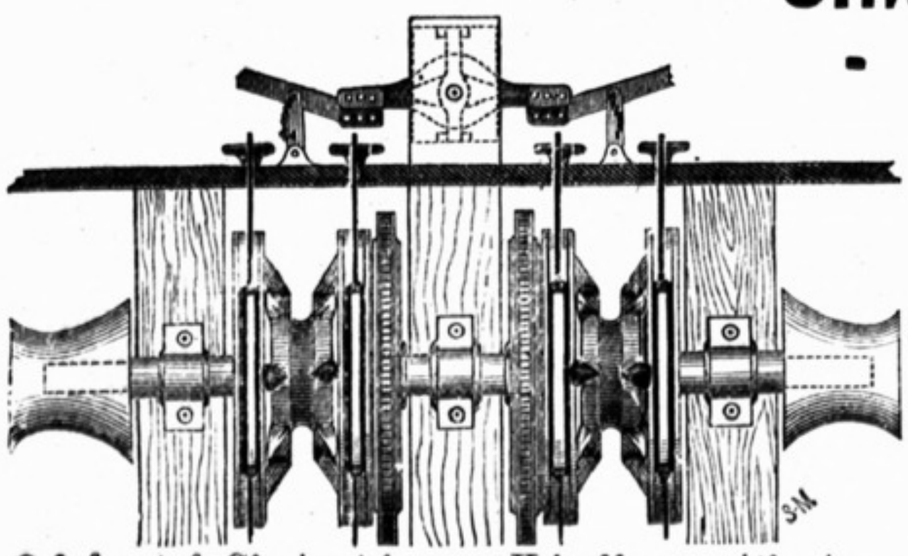

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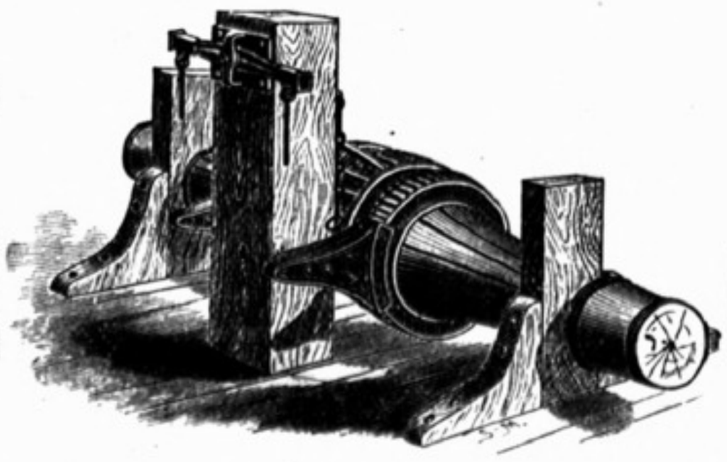
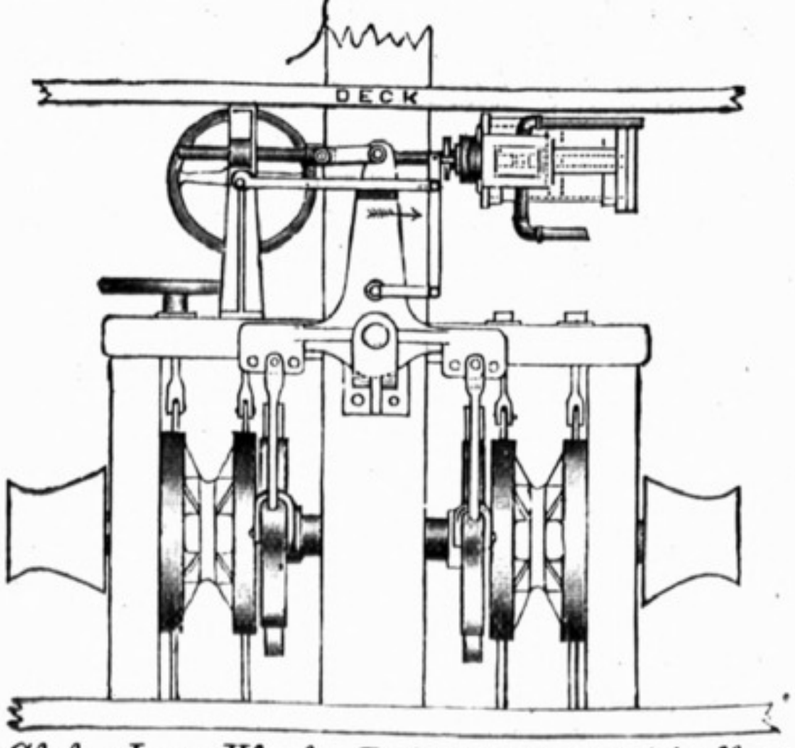


The Common Patent Windlass.



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